

## 24.3: Data and Analysis

### Data Collection (25 points)

Following your detailed protocol, perform all the experiments. Record your observations and take pictures of your key steps in the process. Your observations and images need to be incorporated in your data section and this section should be as detailed as possible as you will use this information to complete your discussion.

Compound	Mass of compound (g)	Volume of water (mL)	Soluble or Insoluble
NaCl			
CaCl <sub>2</sub>			
MgCl <sub>2</sub>			
Na <sub>2</sub> SO <sub>4</sub>			
CaSO <sub>4</sub>			
MgSO <sub>4</sub>			
Na <sub>2</sub> CO <sub>3</sub>			
CaCO <sub>3</sub>			
MgCO <sub>3</sub>			

### Data Processing (25 points)

- Write the balanced equation for the dissolution each ionic compound in water that you tested.

Compound	Dissociation reaction
NaCl	NaCl(s) →
CaCl <sub>2</sub>	
MgCl <sub>2</sub>	
Na <sub>2</sub> SO <sub>4</sub>	
CaSO <sub>4</sub>	
MgSO <sub>4</sub>	
Na <sub>2</sub> CO <sub>3</sub>	
CaCO <sub>3</sub>	
MgCO <sub>3</sub>	

- Fill in the following table using the data and observations from your experiment:

Assumptions made	Testing the assumption	If assumptions are wrong ...
The distilled water is pure	Evaporate it and check for residue	The density would change depending on the density of the contaminant
A laser pointer can identify a solution		

Assumptions made	Testing the assumption	If assumptions are wrong ...

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